FOREST MANAGEMENT UPDATE

Number: 12

Date: March 1991

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NORTHEASTERN AREA
State and Private Forestry

So You Want to Be a Private Non-Industrial Landowner?

by Arlyn W. Perkey

Usually, a professional forestland manager's first contact with a client occurs after the property has been purchased. But what if we could make contact with landowners before they buy? If we could provide them with some pre-purchase advice about what to look for based on their objectives, we might significantly increase the chances of maintaining their interest in management long enough to accomplish those goals. I am suggesting we try to reach prospective landowners before they buy, under the premise that forest stewardship is more likely when people acquire the property most suited to meeting their particular needs and interests. Today's well-informed, astute land shoppers will be tomorrow's successful tree farmers; managing their woodlands to produce the wide range of forest benefits all of us depend on.

"I am suggesting we try to reach prospective landowners before they buy, under the premise that forest stewardship is more likely when people acquire the property most suited to meeting their particular needs and interests."
Arlyn W. Perkey

With this in mind, I have prepared the following considerations that I hope will be helpful to forestland managers who might find themselves providing advice to clients considering the purchase of private non-industrial forestland. These thoughts, based on my own recent experience of buying land in southwestern Pennsylvania, are not intended to cover all the possibilities, especially if applied in other localities. However, they might provide some useful insight into the decision-making process. I have chosen to subdivide my comments into two categories: ***financial objectives*** and ***non-financial objectives.***

FINANCIAL OBJECTIVES

Two ways in which financial returns can be realized from forestland are: 1.) long-term accumulated wealth and 2.) periodic income. If the right trees are properly managed, the long-term accumulation of financial value in the form of timber can be substantial. Also, because land values in many areas are increasing, long-term management provides a relatively good hedge against inflation.

1. Forestland is real estate; therefore, the three most important things to consider are location, location, and location. Location factors are:

a.) The speculation value. Are the bare land values likely to appreciate during the buyer's timeframe because of the desirability of the neighborhood and its proximity to sizable centers of population? In terms of proximity, I'm referring to land being within a reasonable drive for people from the city who might be interested in a hunting camp or weekend retreat.

If structures aren't important to prospective landowners, then it is advisable to look for properties where the value of buildings is not reflected in the purchase price.

b.) The neighborhood. Will the neighbors tolerate the type of activities planned for the property? For example, if the goal is periodic income from timber harvest, will the neighbors tolerate logging activity without protest? High rent districts can be great for increasing land values, but they can be very frustrating places for growing and harvesting timber crops.

c.) Facilities on the property. Are buildings, water, and electricity on the property? Are they necessary or desirable for accomplishment of the ownership objectives? It is easy to invest a considerable amount of capital in structures and amenities that might not be necessary. Remember, for buildings to remain an asset, they must be maintained, which requires a continued investment of time and money.

Low-load-limit bridges could prohibit removal of timber products from a property.

d.) Public transportation network. Is the property now served, and likely to continue to be served, by a road network suitable for management activities necessary to accomplish the objectives? For example, if timber production is an objective, beware of low-load-limit bridges that could prohibit removal of products from the property. It does little good to invest 30 years in growing valuable timber and then discover it cannot economically and/or legally be removed from the site.

3. If timber income is an objective:

a.) Look for properties that are reasonably well-stocked with species that have traditionally been relatively high value. Consumer preferences for wood products do change, but certainly some species are better bets than others. If your client wants to bet on a long shot, that is fine, but he should at least be advised of what he is doing.

b.) Look for properties with timber that is about to cross a value threshold (ie., from poletimber to sawtimber). Most sellers don't have their timber appraised for sale unless they know they have something pretty valuable. Few sellers or buyers recognize much difference in value between a sapling stand and a pole stand. To most sellers, if there isn't much marketable timber there now, that is all that matters. Consequently, the astute buyer should strive to purchase something currently considered to be relatively low value or worthless, but which is about to cross a threshold and become a commercial product.

A wise forestland purchase can be made by looking for a property with timber that is about to cross a value threshold.

c.) Look for properties with productive sites. In most market areas, a very productive site can be purchased for about the same price as a mediocre one.

4. Is the forest highly susceptible to unusual damage by forest pests such as the gypsy moth? With all forest properties, there is always the possibility of catastrophic loss due to forest pests or weather conditions. However, some of these risks are certain enough they should be considered as probabilities at the time a purchase is being contemplated.

NON-FINANCIAL OBJECTIVES

The non-financial objectives for wanting to own a piece of forestland need to be articulated just as carefully as the financial ones. Prospective buyers are often motivated by the desire to own a private forest retreat — a place to go to relax and unwind. Others are interested in recreational activities like hunting, fishing, and cross-country skiing. When inventorying non-financial objectives, remember to consider the desires of all family members involved. Interests vary from person to person, and the more people (adults and children) enthused about the intended land purchase, the greater the prospects for continued ownership, continuity of management, and stewardship of the forestland.

Some important factors to consider when searching for property to meet non-financial objectives include: location, accessibility, and susceptibility to forest pests and weather conditions. Travel to the property in terms of distance, travel time, and traffic conditions must be acceptable to the prospective landowner.

Results of Tree Shelter Survey

by Neil Lamson

We want to extend a special "thank you" to everyone who participated in the Tree Shelter Survey that was included in the last issue of ***Forest Management Update***. We discovered that many foresters have not yet had any experience with tree shelters; however, 73 respondents have had. Following is a summary of those responses:

1. How long have you been using tree shelters?

1 yr.	58%
2 yr.	26%
3 yr.	11%
4 yr.	3%
5 yr.	3%

2. On how many seedlings have you installed tree shelters?

1000+	23%
500-999	11%
100-499	33%
<100	33%

3. On what species have you installed tree shelters?

A total of 29 species were listed! The most common hardwood species were red oak, white ash, black walnut and yellow-poplar. Softwoods included white pine, loblolly pine, white spruce, Norway spruce and white cedar.

4. Natural or planted?

Planted (99%).

5. Where were the seedlings planted?

Bare ground	18%
Field	42%
Undisturbed forest	0%
Clearcut	21%
Shelterwood	7%
Stripmine	4%

6. Type of seedlings?

Most planted seedlings were 1-0 or 2-0 stock.

7. Average seedling height?

1 ft. or less	86%
1 - 2 ft.	12%
Over 2 ft.	2%

Brenda Wilkins checking tree shelters installed on oak seedlings at Coopers Rock Crop Tree Demonstration Area.

Most people are using 4- or 5-foot tree shelters.

The two most frequently reported reasons for using tree shelters are for protection from deer or other pests and to stimulate height growth so seedlings can compete with natural vegetation.

Almost three-fourths of the users reported good results from the tree shelters. Most of the remaining users were uncertain because they had used tree shelters only one year. Just one person out of the 73 respondents had poor results.

Most people had no problems (44%) or only one problem (40%) with tree shelters. The biggest complaint was the cost, which in this survey was not considered a technical problem, even though it is an important consideration.

The most disturbing problem was bluebirds becoming trapped in the shelters. A remedy for this is installing plastic netting over the top of the tree shelter. Maybe someone should investigate why bluebirds are attracted to the structures--are they looking for food, a nesting site or just a perch? At any rate, we may be able to help them out.

Wasps like to nest in the tubes. Be careful when you peek in! One user reported that spraying the wasps killed the bees and the seedlings. However, use of plastic netting on top of the shelter should discourage wasps as well as birds.

Winter kill of the terminal is a problem particularly with oaks that have multiple flushes. Apparently, some seedlings don't harden off inside the shelters.

Some people think insects (japanese beetles and aphids) are attracted to the shelters, and once inside, find it to be a favorable environment. Gypsy moth egg masses were found inside some tree shelters. This problem should be monitored closely.

A good stake is needed to anchor tree shelters, especially in windy locations. It was reported that tree shelters are knocked over by deer, cows and bears. One user suggested that the best stake to use where there are bear problems is a "stake out" with a 30-06 rifle.

CONCLUSION

Tree shelters certainly stimulate the growth of seedlings. However, there seems to be some problems associated with their use; the most significant drawback being the cost. Their expense prohibits many foresters from practicing "walk-away silviculture." A great deal more information about tree shelters will be available in the next year or two, and we will try to keep readers informed of the latest technology.

Can we afford to use shelters on an operational basis?

Given the necessary cultural work, the long rotations, and the projected stumpage values, some people question the economics of growing hardwoods at all. Nevertheless, we have many more considerations than just monetary returns. The introduction or reinforcement of species that lead to greater species diversity and the introduction of genetically improved seedlings into gene pools depleted by high-grading are just a couple of potential benefits that do not have well-defined values.

Actual costs will vary from area to area. For an oak progeny test planted in the spring of 1989 on the Andrew Pickens Ranger District, total establishment costs including seedlings, staking, planting, and shelters averaged $3.00 per tree. Since operational planting should be less complex, a forest planting using 2-foot shelters should have a total cost of less than $2.00 per tree.

Can shelters be used to help establish hardwoods off site?

No!! Trees of a given species should only be planted on a proper site for that species. The shelters are effective in aiding early establishment, but they will not help to overcome the later stresses that come with off-site planting.

Will the shelters biodegrade?

We have seen none that actually have biodegraded. We found the least durable type shelter to be the square ones that tend to split at the corners after 3-5 years. The round types seem to last 5-7 years, and we looked at one brand that was still intact after 8 years.

Do shelters need follow-up maintenance after initial establishment?

Yes. Both the seedlings and the shelters should have annual maintenance for 2-3 years. The most common problem seems to be the shelters falling over due to insufficient support from the stakes.

Will the tree stem be damaged at the point where it emerges from the shelter?

Some damage was done by early models of shelters where the trees had no lateral branches to prevent the stem from whipping against the top of the shelter. The newer models are designed to prevent this type of damage.

Is this a tool to reforest large acreages of hardwoods?

Probably not in any one year. There are a number of reasons why less may be better. First, the supply of suitable seedlings will be limited. Any planting should use high-quality seedlings of the proper species for the site. The seed source of these seedlings is very critical and only local sources, or sources that have been tested in the area, should be used.

In addition, there are the considerations of proper planting and maintenance. Depending on the labor available, it would be better to have fewer acres of well-maintained plantings than many acres that receive only minimal attention. The most value in using these shelters seems to be in the reintroduction or reinforcement of high-value hardwoods on scattered, small areas of 1/4 acre (50 trees) to one acre (100-200 trees).

Trees Please

On Saturday, April 21, 1990, spectators lined the streets of Pekin, Illinois, while a parade of local, state, and federal dignitaries kicked off the **Trees Please** urban forestry program. Mrs. Jeanne Yeutter, wife of former U.S. Secretary of Agriculture, Clayton Yeutter, participated in the ceremonies.

Mrs. Jeanne Yeutter, a Forest Service Volunteer, installing a tree shelter during the Trees Please celebration in Pekin, IL.

Under the **Trees Please** program, 4,500 trees were given to grade school children for planting throughout the community. Another 500 maple, oak, and linden trees were planted and enclosed in protective shelters along the Pekin city streets. Bright orange stickers were placed on the tree shelters as part of an educational program to identify the shelters with the **Trees Please** program.

Traditionally, planting of seedlings in urban environments, especially tree lawns and parkways, has been shunned by urban foresters. However, use of protective tree shelters is now changing this sentiment. The shelters act as a support system for the tree for the first 3-5 years and protect it from lawn mowers and string trimmers. They also provide lateral support and significantly increase growth. A follow-up inspection of the **Trees Please** seedlings revealed that 94 percent of the trees survived. Ten percent of these trees grew over 3 feet and were out the top of the shelter in the first growing season.

Because of the success of the **Trees Please** program, the U.S. Forest Service in cooperation with the Illinois Department of Conservation awarded the city of Pekin a $12,000 grant for development of a video describing the **Trees Please** program. The video is due to be finished in the spring of 1991.

Specific questions pertaining to the **Trees Please** program should be directed to:

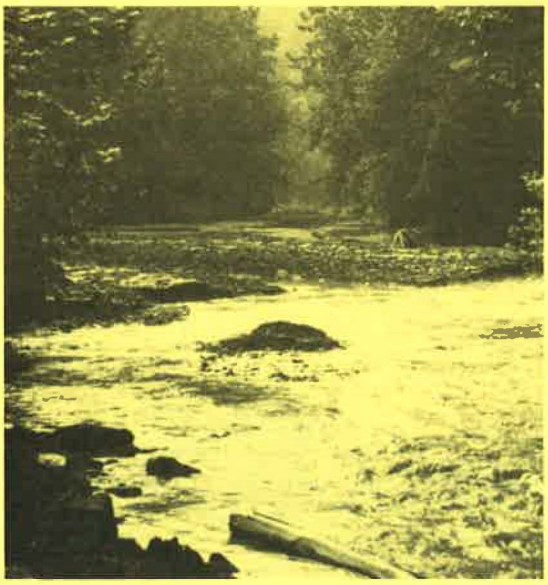
Joe Roush, District Forester
Illinois Department of Conservation
Division of Forest Resources
2960 Court Street
Pekin, IL 61554

(309) 347-5119

Streamside vegetation management in the headwaters helps moderate downstream water temperatures.

Streamside vegetation management is critical in headwater areas as well as adjacent to larger streams. Optimum breeding sites for important game fish frequently exist in the headwaters. An increase in water temperature in these areas may result in a decrease in fish reproduction. It is the smaller streams that usually have the greatest temperature problems. Fortunately, buffer area effectiveness at controlling water temperature increases as stream size decreases. Therefore, if water temperatures are managed in the upper portion of the watershed, temperatures in larger downstream channels will be maintained as well.

Studies aimed at determining the effectiveness of buffer areas as a means of moderating stream water temperatures have produced convincing results. One study compared water temperatures of two streams; one flowing through cropland and the other flowing through a forest. The cropland stream, which lacked a buffer, had a maximum weekly temperature that was 41 to 55.4 degrees Fahrenheit warmer than that of the stream flowing through the forest. Not only did the buffer keep the water temperature cooler during the summer months, but it kept the forest stream warmer during the coldest months of winter.



Streamside vegetation is critical for moderating stream water temperatures.

Research statistics reveal that angular canopy density (a parameter used to measure shading) is strongly correlated with temperature control. Therefore, it is recommended that canopy density be kept at least at 80 percent coverage. Width of the buffer area also influences its effectiveness at regulating stream water temperatures. Maximum shading is reached within a width of 80 feet, with 90 percent of the maximum reached within 55 feet.

Many landowners interested in fishing are unaware of the potential that exists to improve game fish habitat on their property and downstream ownerships by wise management of forested buffer areas along streams. And, although there are other important benefits buffer areas offer, such as contributing to the energy source of the stream and reducing the amount of harmful nutrients that enter waterways, perhaps a discussion about these can wait for a nice sunny day when the pole is handy and the fish are biting.

Note: For further reference, see "Crop Tree Management in Riparian Zones" in Issue 11 of ***Forest Management Update,*** July 1990.

Problems may arise in agricultural areas where water table management for cropland conflicts with forest management; therefore, foresters need to know the effects that water level manipulation can have on the forest resource.

The following paragraphs describe potential adverse and positive consequences of water table management:

Most seedlings are killed back to the ground if waterlogged for more than two weeks during the growing season. If the root stock survives, it may resprout after the water recedes, but it will not be as vigorous. Species that leaf out late such as green ash, water hickory, and overcup oak are more likely to survive waterlogging even if the waters remain into July. Waterlogging is better tolerated by vigorous trees.

Seedling survival is also affected by the depth of surface water. Under partial inundation during the growing season, species such as red maple, yellow-poplar, sweet gum and cottonwood survive less than 40 days. Under total inundation, the seedlings of boxelder, green ash, black walnut, sweet gum, sycamore, cottonwood, bur oak, pin oak, shumard oak and American elm survive only about 30 days. If the root crown is not permanently covered with water, flood tolerant bottomland species survive well. However, flood intolerant species die quickly when water levels cover the root crown. (For further reference, see ***Forest Management Update***, Issue 11, for flood tolerance rating by species.)

Aeration of roots within two feet of the surface is critical for growth and survival, so periodic low-moisture conditions are essential. If extended intervals of inundation occur during the summer months, tree evapo-transpiration will be reduced. Effects of reduced evapo-transpiration vary according to the ability of individual species to uptake nutrients. For example, swamp chestnut oak generally recovers from a long summer inundation, but other species such as northern red oak, eastern red cedar, dogwood, loblolly pine and white oak suffer because they have less ability to uptake nutrients. If a second inundation occurs during the same growing season, there will be additional decline of tree vigor. Evidence of damage might not appear immediately because the roots are usually affected first.

If extended periods of inundation occur during the summer months, tree vigor will decline.

Dry periods are vital for germination and seedling survival. To germinate, even a water-loving species such as bald cypress needs exposed ground for about 4 to 6 weeks. Most seeds do not germinate under water (black willow is an exception). Germination of hackberry, red maple, sycamore, shumard oak and American elm is impaired by soil saturated to field capacity for more than 30 days. High soil saturation reduces seedling height growth, prohibits adventitious or secondary root development, and can result in mortality.

In accordance with research conducted in coastal North Carolina and northwest Florida, forested wet areas were drained, harvested, and planted to slash and loblolly pine. Once established, the pine plantations grew an average of 1.2 to 2 feet in height per year. Early indications suggest an increase of approximately 20 feet in site index at 50 years may be possible with adequate drainage. If this kind of growth could be maintained, pulpwood yields on many wetlands throughout the coastal plain might be greatly increased with a drainage treatment.

Because of the potential conflict between management for agricultural crops and forest crops, forestland managers need to conscientiously monitor woodlands near existing and planned water control structures and drainage ditches. Are growth and yield increasing, or is a reduction in productivity occurring? Are the trees dying because they do not have enough water, or because they have too much water? Is the stand composition changing to non-commercial species that are tolerant of high water tables? Are forested wetlands disappearing due to drainage? The answers to these questions will vary according to the specific factors influencing any given area, so keen observation and time will tell the story. However, foresters need to have an understanding of the existing and potential effects of water table management so they can advise landowners regarding management alternatives that will best accomplish their objectives.

Are forested wetlands disappearing because of drainage?

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Table 1. Comparison of the shortcut formula **sawtimber** estimates with SILVAH's estimates, using the same point sample measurements.

Stand Number	Shortcut Mean	Limit of Error (1SD)	SILVAH Mean (Net)	SILVAH Mean (Gross)
1	9,260 BF	±8 %	8,350 BF	10,001 BF
2	10,369 BF	±7 %	9,209 BF	10,761 BF
3	9,669 BF	±9 %	8,606 BF	10,115 BF

Table 2. Comparison of the shortcut formula **cordwood** estimates with SILVAH's estimates, using the same point sample measurements.

Stand Number	Shortcut Mean	Limit of Error (1SD)	SILVAH Mean (Net)	SILVAH Mean (Gross)
1	31.3 CDS	±7 %	32.0 CDS	40.0 CDS
2	31.4 CDS	±6 %	32.0 CDS	40.0 CDS
3	30.3 CDS	±7 %	32.2 CDS	40.2 CDS

So what does all this information really mean? I interpret the following:

1. The board foot volume comparisons for the three similar stands are very consistent. Relative to SILVAH, the shortcut method tends to overestimate the net board foot volume by about 10 percent. Also, the shortcut formula board foot volume is about halfway between the net and gross SILVAH volume estimates. Review of this paper by Burl Ashley revealed that he frequently applied a cull factor of 5-10 percent to the shortcut formula volumes to account for defect that was not visible. If this cull factor were applied in this stand, the results would be close to SILVAH's estimate.

2. The cordwood volume estimates for the three similar stands are very consistent, also. They are close to the SILVAH net cordwood volume estimates.

If these interpretations are correct, what are the implications for use of these timber inventory tools?

First, we must remember that the inventory tool to use is dependent on the inventory objectives. SILVAH provides much more information than just volume estimates. It can also produce computer derived prescriptions and volume projections, which certainly cannot be obtained with a shortcut formula. I am impressed with SILVAH as an analytical tool that can provide many parameters describing the characteristics of a stand; but I do, however, have reservations regarding its prescriptive capabilities.

Plank Skid-Trail Bridge Construction

The information that follows is contained in a 12-minute video prepared by the University of Vermont Extension Service. Preview copies are available on a 10-day free loan basis. The video can be purchased for $14.95 by contacting Yuriy Bihun, Project Forester, UVM Extension Service, 346 Aiken Center, Burlington, VT 05405-0088, Phone 802/656-3258.

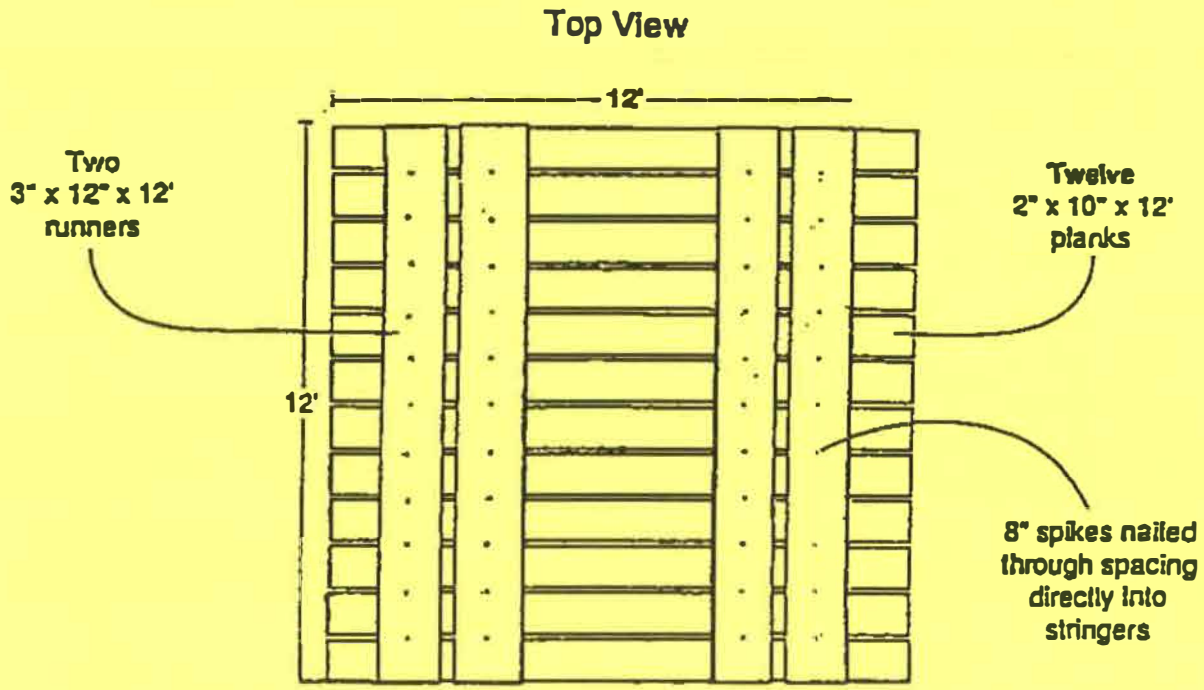
Temporary, plank skid-trail bridges constructed from native materials are an economic alternative to the conventional log bridges used on most harvesting operations in the Northeast. Lightweight, reusable and durable, these bridges cost less to install and remove than culverts or other traditional erosion control structures. They do not require heavy machinery to install and can be assembled on site by two workers in two or three hours. Plank bridges minimize sedimentation associated with stream crossings and cause considerably less streambank disturbance than log bridges or culverts do.

Because of the variability in quality and grade of native materials, this prototype bridge has not met any specific code requirements. However, it has been field tested and is based on working plank bridges used on Vermont State Forests. In theory, this design will support approximate weights of up to eight (8) tons and spans of 12 feet. The bridge is designed to last more than one season, but runners may have to be replaced periodically to preserve the structural integrity of the planks or decking. The remaining materials can be disassembled and used at the next site.

The dimensions of the boards and size of the components are variable depending on the intended use. The length and number of stringers, the size of the headers, or the number of boards per stringer can be adjusted for anticipated load capacities. For example, 3"x10" dimension stock can be substituted for 2"x10" boards for greater strength and durability.

Assembly Instructions

1) Clear the area of brush and large obstructions;
2) Nail together two (2) 2"x10"x12' headers, set into place on the streambank, and level;
3) Assemble stringers by bolting four (4) 2"x10"x12' pieces together with 12" threaded rods, washers and nuts. Three-fourth-inch (3/4") holes can be pre-bored or bored on site with a portable gas drill;
4) Set five (5) 8"x10"x12' laminated stringers on the headers with one stringer centered in the middle and two pairs of stringers placed 12"-18" apart, aligned to match the axle width of the machine (ex. JD 540-D - 76.6");
5) Set twelve (12) 2"x10"x12' planks at right angles to stringers. Leave 1"-2" spacing between planks for winter bridges. In order to facilitate assembly and knockdown, do not nail planks to the stringers;
6) Set four (4) 3"x12"x12' runners on the planks, centered over the stringers. Fasten the runners to the bridge by driving 8" spikes through the runners, between the bridge planks and into the stringers. This leaves the decking loose for easy disassembly and re-use. The runners serve to protect the planks as well as hold them in place;
7) Nail two (2) 2"x10"x12' fascia boards across the ends of the stringers to prevent dirt and debris from falling through;
8) Mound snow, gravel, or fill material against the fascia to serve as a ramp and to hold the bridge in place.

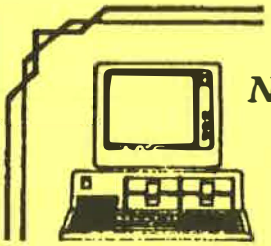


Bridge Specifications

Material	Function	Size W L H	Number	Price* (per unit)	Total
Hemlock	Headers	2"x10"x12'	4	$6.80	$ 27.20
Hemlock	Stringers (5)	2"x10"x12'	20	$6.80	$136.00
Hemlock	Planks	2"x10"x12'	12	$6.80	$ 81.60
Hemlock	Runners	3"x12"x12'	4	12.24	$ 48.96
Hemlock	Fascia	2"x10"x12'	2	$6.80	$ 13.60
Metal	Threaded Rods	3/4"x12"	20	$1.17	$ 23.40
Metal	Spikes	1/8"x 6"	1 lb.	$0.89	$ 00.89
"	"	1/8"x 8"	1 lb.	$0.89	$ 00.89
	Washers	3/4"	40	$0.08	$ 3.20
	Nuts	3/4"	40	$0.15	$ 6.00
				Total Material	$341.54
				Tax	$ 13.66
				Labor**	$200.00
				Total Cost	$555.20

* All costs based on a July 1990 price of $.34/bf for rough-sawn, unseasoned Eastern hemlock.

** Labor costs based on two (2) man-days at $100/day to purchase, deliver, and assemble materials.



Neil Lamson's
Computer Corner

Do I Really Need a Computer?

We foresters are a conservative lot. And as such, I run into quite a few foresters who don't have a computer, even though we're in the computer age. Their kids may be using computers in school. The young forester that was just hired fresh out of college used computers in surveying and mensi classes. But still I hear foresters saying, "Well, a computer would be nice, but..... I don't have thousands of dollars to put into a fancy electric typewriter." For consultant foresters, the decision of buying a computer should be approached just like any other business purchase—"Will it pay for itself?"

Here are several questions to ask yourself:

Could I get this task done faster with a computer? Take a good, hard look at your daily tasks. Time saved for each task multiplied by the number of times you perform the task equals total time saved, which equates to time available to do other things. Word processing (typing on a computer) is probably the biggest savings. Typing time is cut at least in half with a computer. Another example is surveying. A boundary survey with 50 field shots can be balanced in about 10 minutes with a computer. This includes entering the data and printing the balanced traverse, the error of closure and the acreage. Some programs also print maps, but it would take a few more minutes to enter map information (legends, scale, etc.).

Could I produce a better product with a computer? This is a little harder to get a handle on, but it could be important. Modern printers produce very professional-looking documents. For bid proposals, the way the information **looks** can be the deciding factor in who gets the job. If a client gets itemized bills that look good and are easy to understand, he/she may be more inclined to use your services again. A better product means more business in the long run.

Could I do things with a computer that I can't (or don't have the time to) do now? Detailed cruise reports are a good example of things that you might not have time to do without a computer. With the aid of a computer you can easily produce cruise reports by species, size class and product. Not only can you compute volumes, but you can calculate value using a different price for each species, size class and product. And all this is done without math errors! Mailing lists and client lists are easy to manage on a computer. I imagine some consultants keep a daily log of time and expenses on a computer. With the push of a key they can see things like accounts receivable by client and expenses by category. This makes it a breeze to produce itemized bills and accounting summaries.

Of course, this is not a complete list, and your situation probably has some different considerations. If you need help in deciding whether or not to get a computer, the following people, in addition to myself, are willing to talk with you about it free of charge:

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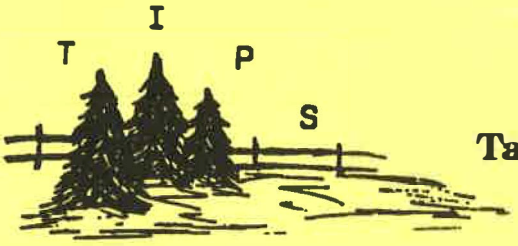
USDA Forest Service
P.O. Box 4360
Morgantown, WV 26505
(304) 291-4484

David B. Kittredge
University of Massachusetts
Dept. of Forestry & Wildlife Mgmt.
Holdsworth Nat. Resource Center
Amherst, MA 01003
(413) 545-2665

A. Jeff Martin
University of Wisconsin-Madison
Division of Forestry
1630 Linden Drive
Madison, WI 53706
(608) 262-0134



Taming Wild Birds to Eat from Your Hand

Tip Number 9:

*The following was taken from a booklet titled **How to Tame Wild Birds to Eat from Your Hand** by Edward T. Cesa, U. S. Forest Service, Morgantown, WV.*

It is amazing how much fun and enjoyment can be derived from watching birds at a feeder in your backyard. If you like observing and feeding wild birds, why not go a step further and tame a few of them to eat from your hand?

The easiest species of wild birds to tame is chickadees. They are commonly found throughout most of the continental United States. Their preferred food is sunflower seeds.

Proper placement of the bird feeder is the first step in taming wild birds. Locate the feeder reasonably close to an area heavily traveled by you and your family. Try to keep it within close proximity of trees and shrubs to provide the birds with protection from predators and environmental conditions.

The next step in the taming process is to stand by your feeder when the birds make their daily rounds. The initial standing distance between you and the feeder will vary from about 40 feet to as little as 10 or 15 feet. The distance is determined by how your presence affects the feeding habits of the birds. If you are too close, they will not eat at the feeder. If that happens, take a few steps back. This is where your patience and perseverance will be tested. You must be consistent with your presence at the feeder every day. The birds will eventually accept the routine of your standing near the feeder, and they will go freely to it while you are there.

Gradually move a little closer, perhaps two steps closer every other day. Once again, the distance you move will depend on how the birds accept your presence. During late fall, winter, and early spring, the birds are more courageous because food is scarce. Thus, they are more likely to accept and tolerate your presence. While standing, do not make any sudden movements which may frighten the birds. You want them to build trust and confidence in you.

When you feel confident that at least one of the chickadees may be willing to take a sunflower seed from your hand, you are ready for the final step in taming wild birds. First, remove all the sunflower seeds from your feeder. Place a trail of these seeds along the length of the feeder leading to a point where you can rest your outstretched palm containing more of the tempting sunflower seeds. At first, the birds will be extremely hesitant to come to the feeder. You must remain perfectly still when they do approach. You can expect a bold little chickadee to eventually land on the side of the feeder farthest away from you, take the first sunflower seed and fly away. After it has eaten that seed it will come back for another. This procedure will be repeated until the only seeds left will be in your hand. At this point, it is extremely important that you do not make any sudden movements. If the bird is still hungry, it will land on the feeder, hesitate cautiously . . . . . then hop onto your hand, snatch a sunflower seed, and fly away.

Once one bird starts, others will follow its lead; and they will become more tame as their trust in you grows. The total number of days to tame your first chickadee will vary depending on the initial tameness of the birds, the amount of time you put into taming, and how consistent you are. However, there are immense rewards in having these wild, beautiful creatures rest on your hand to feast and become steadfast friends.